

Lakeland Catholic



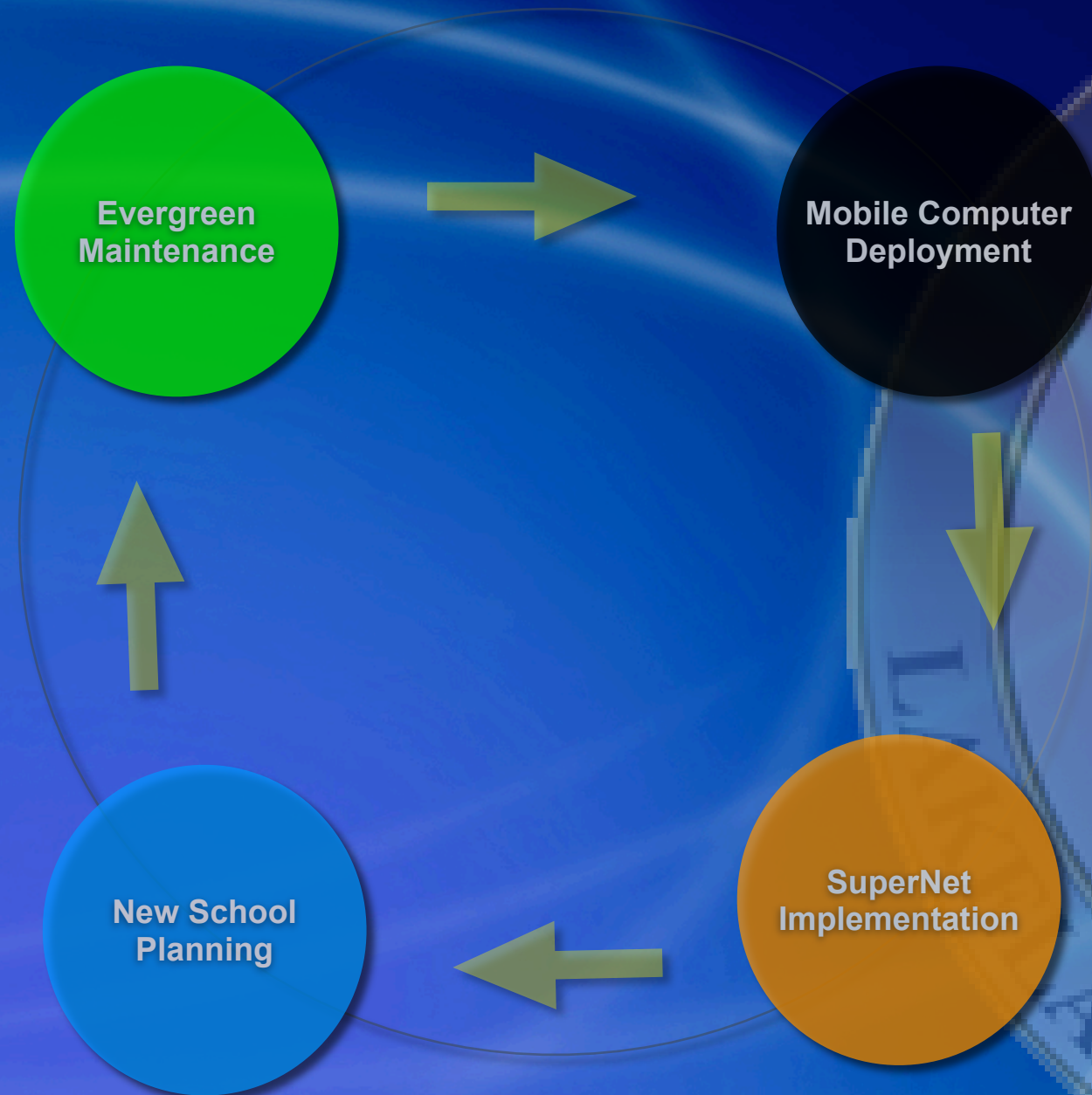
“Planning is bringing the future into the present so you can do something about it now.”



Overview

- **School Based Evergreening Planning**
- **New School Planning**
- **One to One Planning**
- **Technology Support Model**
- **Implementation Questions**
- **What have we done to this point?**

Planning For The Future



Workstation Specifications

Workstation Descriptions	Workstation Location				
ADMIN	PRINCIPAL	VICE PRINCIPAL	RECEPTION AND SECRETARY	CST	LIBRARIAN
STUDENTS	LAB	CLASSROOM	LIBRARY		
STAFF	CLASSROOM	STAFF ROOM	GUIDANCE	OUTREACH	YOUTH
DISTRICT	SUPERINTENDENT	SECRETARY TREASURER	FINANCE STAFF	RECEPTION	SECRETARY STAFF
CURRICULUM SUPPORT	DEPUTY SUPERINTENDENT	SECRETARY STAFF	ASIS	LITERACY	RELIGION
	FRENCH	ABORIGINAL			
TECHNOLOGY	DIRECTOR	TECHNICIAN	NETWORK TECHNICIAN	SIS	ICT
Workstation Specifications	3-5 YEAR WARRANTY ON PARTS AND SERVICE	10/100 ETHERNET CARD	CURRENT INTEL PROCESSOR	CURRENT OFFICE SOFTWARE	
	1 GIG RAM	CD/DVD BURNER	INTERNAL SPEAKERS	CURRENT OPERATING SYSTEM	FIREWIRE AND USB
	17'-19' MONITOR	OPTIC MOUSE	\$1800 - \$2500.00		

Workstation Infrastructure

SCHOOL	ADMIN	TEACHER	LAB	LIBRARY	SITE TOTAL	INVESTMENT TO DATE
AJSH	10	25	60	6	101	\$181,800.00
MRE	7	15	30	6	58	\$104,400.00
SDE	7	20	30	6	63	\$113,400.00
DBE	7	15	60	6	88	\$158,400.00
NDE	7	20	28	6	61	\$109,800.00
NDH	7	15	55	6	81	\$149,400.00
HF	2	4	15	-	21	\$ 37 800.00
DISTRICT	10				10	\$18,000.00
CURRICULUM	6				6	\$10,800.00
TECHNOLOGY	6				6	\$10,800.00
TOTAL	67	110	263	36	474	\$894,600.00

Printer Specifications

PRINTER DESCRIPTIONS	PRINTER LOCATION				
ADMIN	OFFICE	LIBRARY	PHOTOCOPIER		
STUDENTS	LAB	CLASSROOM	LIBRARY		
STAFF	STAFF ROOM	GUIDANCE	PHOTOCOPIER		
DISTRICT	OFFICE	FINANCE STAFF	SECRETARY STAFF	PHOTOCOPIER	
CURRICULUM SUPPORT	SECRETARY STAFF	CL OFFICE	NDH OFFICE	PHOTOCOPIER	
TECHNOLOGY	OFFICE	PHOTOCOPIER			
PRINTER SPECIFICATIONS	1-3 YEAR WARRANTY ON PARTS AND SERVICE	10/100 ETHERNET CARD AND USB	RICOH/XEROX	256 - 512 RAM	
	TRAY EXPANSION	\$2000 - \$2500.00			

Printer

Infrastructure

SCHOOL	ADMIN	TEACHER	LAB	LIBRARY	SITE TOTAL	INVESTMENT TO DATE
AJSH	1	1	2	1	5	\$10, 000.00
MRE	1	-	2	1	4	\$8, 000.00
SDE	1	-	1	1	3	\$6, 000.00
DBE	1	-	1	1	3	\$6, 000.00
NDE	1	-	1	1	3	\$6, 000.00
NDH	1	-	2	1	4	\$8, 000.00
HF	1		1		2	\$4, 000.00
DISTRICT	1				1	\$2, 000.00
CURRICULUM	3				3	\$6, 000.00
TECHNOLOGY	1				1	\$2, 000.00
TOTAL	12	1	12	7	32	\$64 000.00

Switch Specifications

SWITCH DESCRIPTIONS	SWITCH LOCATION				
SERVER SWITCH	SERVER ROOM				
NETWORK SWITCH	LAB	CLASSROOM	SERVER ROOM		
SWITCH SPECIFICATIONS	1-3 YEAR WARRANTY ON PARTS AND SERVICE	10/100 ETHERNET GIGABYTE COPPER GIGABYTE FIBER	DLINK	2 - 10 GIG BACK PLANE	
	RACK MOUNTING STACKABLE	24 - 48 WORKSTATION PORTS 5 - 10 NETWORK PORTS	\$2000 - \$2500.00		
WIRELESS ACCESS POINTS	WIRELESS WEP 128 BIT WAP 128 BIT MAC ADDRESS CONTROL MANAGEMENT 10/100 AND BRIDGING ACCESS RADIUS AUTHENTICATION	30 CONCURRENT USER ACCESS SUPPORTS OSX AND WINDOWS AUTHENTICATION	\$300 - 1 000.00		

Switch

Infrastructure

SCHOOL	SERVER ROOM	LABS	LIBRARY	OFFICE	WIRELESS ACCESS	SITE TOTAL	INVESTMENT TO DATE
AJSH	10	-	-		-	5	\$10, 000.00
MRE	3	2	-		1	6	\$8, 000.00
SDE	5	-	-		-	5	\$6, 000.00
DBE	3	4	1		-	3	\$6, 000.00
NDE	3	2	-	-	-	3	\$6, 000.00
NDH	6	-	1	1	-	4	\$8, 000.00
HF	3	-	-	-	2	2	\$4, 000.00
DISTRICT	2	-	-	-	2	1	\$2, 000.00
CL SUB OFFICE	1				1	2	\$2 000.00
CURRICULUM	-					-	\$6, 000.00
TECHNOLOGY	4				1	5	\$2, 000.00
TOTAL	12	1			7	36	\$72 000.00

Server Specifications

SERVER DESCRIPTIONS	SERVER LOCATION				
FILE SERVERS	DISTRICT SERVER ROOM	SCHOOL SERVER ROOM			
SERVICE SERVERS -DISTRICT WEB SERVER -DISTRICT EMAIL SERVER -DISTRICT IPP SERVER -ELLUMINATE SERVER -VC SERVER -DISTRICT HELP DESK -DISTRICT STREAMING -DISTRICT CITRIX -DISTRICT CMAP -DISTRICT INTERMAPPER -DISTRICT STATSSEEKER -SCHOOL SAS SERVERS	DISTRICT SERVER ROOM	SCHOOL SERVER ROOM			
SERVER SPECIFICATIONS	1-3 YEAR WARRANTY	10/100 ETHERNET GIGABYTE COPPER GIGABYTE FIBER	INTEL/XEON CURRENT DUAL CORE PROCESSORS	2-4 GIGS OF RAM 2-4 ATA 36 - 60 GIG HARD DRIVES	
	RACK MOUNTING STACKABLE	CD/DVD BURNER		USB AND FIREWIRE	
	CURRENT OPERATING SYSTEM	VGA MONITOR PORT		\$5000 - 7000.00	
NETWORK STORAGE	1- 3 YEAR WARRANTY	GIGABYTE COPPER		ULTRA WIDE SCSI	
	LEVEL 3 - 5 RAID	60 - 120 GIG HARD DRIVES		NETWARE, OSX, WINDOWS	
				\$10 000.00 -15 000.00	

Server Infrastructure

SCHOOL	SERVER ROOM	NETWORK STORAGE	SITE TOTAL	INVESTMENT TO DATE
AJSH	2	1	3	\$15, 000.00
MRE	2	1	3	\$15, 000.00
SDE	2	1	3	\$15, 000.00
DBE	3	1	4	\$20, 000.00
NDE	2	1	3	\$15, 000.00
NDH	2	1	3	\$15, 000.00
HF	1	1	2	\$10, 000.00
DISTRICT	1	1	2	\$10, 000.00
CURRICULUM	-		-	-
TECHNOLOGY	10	1	11	55, 000.00
TOTAL	25	9	34	\$170 000.00

SuperNet Specifications

EQUIPMENT DESCRIPTION	SERVER LOCATION				
CUSTOMER EDGE DEVICES	DISTRICT SERVER ROOM	SCHOOL SERVER ROOM			
VIDEO CONFERENCING	MEETING ROOMS	CLASSROOMS			
ALBERTA LEARNING CCD	DISTRICT SERVER ROOM	SCHOOL SERVER ROOM			
EDGE SPECIFICATIONS	1-3 YEAR WARRANTY	10/100 ETHERNET GIGABYTE COPPER	LAYER 3 - 5 ROUTING	RACK MOUNTING STACKABLE	
	WEB BASE ADMINISTRATION	TRAFFIC SHAPING AND INTRUSION DETECTION		MALWARE AND VIRUSES FILTERING	
	CONTENT FILTERING	SUPPORT SERVICES AND TRAINING		\$5000 - 15 000.00	
VIDEO CONFERENCING SPECIFICATIONS	SUPERNET COMPLIANT	POINT TO POINT AND/OR MULTIPPOINT ACCESS		SUPPORTED COMPRESSION STANDARDS	
	WORKSTATION SUPPORT VIDEO	EASY OF SETUP AND USE		WHITEBOARD INTEGRATION BRIDGE IT SOFTWARE	
				\$15 000.00 - 50 000.00	
ALBERTA LEARNING CCD SPECIFICATIONS	ALBERTA LEARNING SUPPLIED QUICKTIME SERVERS	MUST PROVIDE APPROPRIATE ROUTING AND WORKSTATION PLUGIN UPDATES ON DISTRICT WORKSTATIONS.		- ALBERTA GOVERNMENT FUNDED PROJECT.	

SuperNet Infrastructure

SCHOOL	CED	CCD	INVESTMENT TO DATE
AJSH	1	1	\$5, 000.00
MRE	1	1	\$5, 000.00
SDE	1	1	\$5, 000.00
DBE	1	1	\$5, 000.00
NDE	1	1	\$5, 000.00
NDH	1	1	\$5, 000.00
HF	1	1	\$5, 000.00
DISTRICT	-	1	\$5, 000.00
CL SUB OFFICE	-		\$5, 000.00
TECHNOLOGY	2	1	\$15, 000.00
TOTAL	9	8	\$60 000.00

Software Specifications

SOFTWARE ITEM	SOFTWARE DESCRIPTION	ANNUAL RENEWAL COST
NETWARE FILE AND EMAIL SERVICES	-PROVIDES FILE SERVICES AND EMAIL SERVICES FOR THE DISTRICT.	\$8 000.00
FORTIGATE (MALWARE, SPYWARE, VIRUSES UPDATES)	-PROVIDES CONTENT PROTECTION FOR SUPERNET AND INTERNET TRAFFIC ACROSS THE DISTRICT	\$5 500.00
WORKSTATION AND SERVER VIRUS PROTECTION	-CA VIRUS CLIENTS FOR NETWARE SERVERS AND PC WORKSTATIONS	\$3 000.00
ATHENA SOFTWARE	-LIBRARY SOFTWARE USED AT ALL THE SCHOOL SITES AND DISTRICT RELIGION PROGRAM.	\$5 000.00
HELP DESK SOFTWARE	-DISTRICT ONLINE HELP DESK.	\$2 000.00
IPP SERVER	-DISTRICT ONLINE IPP PROGRAM.	\$2 000.00
SASIXP AND DISTRICT INTEGRATION	-DISTRICT STUDENT INFORMATION SYSTEM SOFTWARE.	\$15 000.00
STUDENTS ACHIEVE	-DISTRICT WEB BASED STUDENT INFORMATION SYSTEM.	\$12 000.00
ELLUMINATE	-DISTRICT VIDEO CONFERENCING AND SUPPORT SITE.	\$3 500.00
GWGUARDIAN	-DISTRICT EMAIL CONTENT FILTERING SOFTWARE.	\$4 000.00
INTERMAPPER	-DISTRICT NETWORK MAPPING AND MONITORING SOFTWARE.	\$1 000.00
DEEP FREEZE	-DISTRICT PC IMAGE MAINTENANCE SOFTWARE	\$4 000.00
VISIONS SOFTWARE	-DISTRICT PC LAB INSTRUCTIONAL SOFTWARE	\$4 000.00
ADOBE/MACROMEDIA	-DISTRICT ADOBE AND MACROMEDIA SUITES	\$10 000.00
RETROSPECT	-OSX SERVER BACKUP SOFTWARE	\$1000.00
ARCSERVER	-PC NETWARE BACKUP SOFTWARE	\$5 000.00
TYPING PAL/TAP TOUCHE	-ONLINE TYPING PROGRAM	\$2 000.00
GHOST	-PC IMAGING SOFTWARE.	\$4 000.00
CASPER	-OSX IMAGING AND WORKSTATION INVENTORY PROGRAM	\$2 000.00

Software Specifications Continued

SOFTWARE ITEM	SOFTWARE DESCRIPTION	ANNUAL RENEWAL COST
OSX WORKSTATION AND SERVER SOFTWARE ASSURANCE	-PROVIDES ALL OSX SERVERS AND WORKSTATIONS WITH THE LATEST OSX UPGRADES.	\$9 000.00/3 YEARS
DISTRICT WEBSITE	-WebCROSSING SOFTWARE MAINTENANCE	\$3 000.00
TOTAL		\$105 000.00

Total Cost of Ownership

TECHNOLOGY	TECHNOLOGY DESCRIPTION	INVESTMENT
COMPUTER WORKSTATIONS	-INCLUDES ALL STAFF AND STUDENT WORKSTATIONS ACROSS THE DISTRICT.	\$894,600.00
PRINTING	-INCLUDES ALL NETWORK PRINTERS ACROSS THE DISTRICT FOR STAFF AND STUDENTS.	\$64 000.00
SERVER EQUIPMENT	-INCLUDES ALL NETWORK SERVER SERVICES FOR STAFF AND STUDENTS ACROSS THE DISTRICT.	\$170 000.00
NETWORK SWITCHING	-INCLUDES ALL NETWORK SWITCHING EQUIPMENT FOR ALL DISTRICT SITES.	\$72 000.00
TOTAL		\$1 200 600.00
SOFTWARE MAINTENANCE	-DISTRICT SOFTWARE MAINTENANCE SUPPORT.	\$105 000.00
SUPERNET SERVICES	-ALBERTA GOVERNMENT NETWORK.	\$0.00
INTERNET FEES	-DISTRICT INTERNET ACCESS FEES.	\$35 000.00/YEARLY

Four Year Rollover Planning

TECHNOLOGY	TECHNOLOGY DESCRIPTION	ANNUAL INVESTMENT
COMPUTER WORKSTATIONS	-INCLUDES ALL STAFF AND STUDENT WORKSTATIONS ACROSS THE DISTRICT.	\$894,600.00/4=\$223 650.00
PRINTING	-INCLUDES ALL NETWORK PRINTERS ACROSS THE DISTRICT FOR STAFF AND STUDENTS.	\$64 000.00/4=\$16 000.00
SERVER EQUIPMENT	-INCLUDES ALL NETWORK SERVER SERVICES FOR STAFF AND STUDENTS ACROSS THE DISTRICT.	\$170 000.00/4=\$42 500.00
NETWORK SWITCHING	-INCLUDES ALL NETWORK SWITCHING EQUIPMENT FOR ALL DISTRICT SITES.	\$72 000.00/4=\$18 000.00
TOTAL		\$300 150.00
*NOTE:	-THIS CYCLE WOULD REQUIRE AN ADDITIONAL \$200 150.00 PER YEAR FOR THE CURRENT BUDGET TO SUSTAIN.	

Five Year Rollover Planning

TECHNOLOGY	TECHNOLOGY DESCRIPTION	ANNUAL INVESTMENT
COMPUTER WORKSTATIONS	-INCLUDES ALL STAFF AND STUDENT WORKSTATIONS ACROSS THE DISTRICT.	\$894,600.00/5 =\$178 920.00
PRINTING	-INCLUDES ALL NETWORK PRINTERS ACROSS THE DISTRICT FOR STAFF AND STUDENTS.	\$64 000.00/5=\$12 800.00
SERVER EQUIPMENT	-INCLUDES ALL NETWORK SERVER SERVICES FOR STAFF AND STUDENTS ACROSS THE DISTRICT.	\$170 000.00/5=\$34 000.00
NETWORK SWITCHING	-INCLUDES ALL NETWORK SWITCHING EQUIPMENT FOR ALL DISTRICT SITES.	\$72 000.00/5=\$14 400.00
TOTAL		\$240 120.00
*NOTE:	-THIS CYCLE WOULD REQUIRE AN ADDITIONAL \$140 120.00 PER YEAR FOR THE CURRENT BUDGET TO SUSTAIN.	

Six Year Rollover Planning

TECHNOLOGY	TECHNOLOGY DESCRIPTION	ANNUAL INVESTMENT
COMPUTER WORKSTATIONS	-INCLUDES ALL STAFF AND STUDENT WORKSTATIONS ACROSS THE DISTRICT.	\$894,600.00/6 =\$149 100.00
PRINTING	-INCLUDES ALL NETWORK PRINTERS ACROSS THE DISTRICT FOR STAFF AND STUDENTS.	\$64 000.00/6=\$10 667.00
SERVER EQUIPMENT	-INCLUDES ALL NETWORK SERVER SERVICES FOR STAFF AND STUDENTS ACROSS THE DISTRICT.	\$170 000.00/6=\$28 333.00
NETWORK SWITCHING	-INCLUDES ALL NETWORK SWITCHING EQUIPMENT FOR ALL DISTRICT SITES.	\$72 000.00/6=\$12 000.00
TOTAL		\$200 100.00
*NOTE:	-THIS CYCLE WOULD REQUIRE AN ADDITIONAL \$100 100.00 PER YEAR FOR THE CURRENT BUDGET TO SUSTAIN.	

Evergreen Summary

TECHNOLOGY	ANNUAL INVESTMENT
FOUR YEAR COMMITMENT	\$300 150.00
FIVE YEAR COMMITMENT	\$240 120.00
SIX YEAR COMMITMENT	\$200 100.00

Big Picture Overview

Scenario	Year	Evergreen Cycle	One to One Deployment	Video Conferencing Deployment	Total Cost
Scenario One	2006-07	4 Year Cycle (\$300,150.00)	\$132,390.00		\$432,540.00
Scenario Two	2006-07	5 Year Cycle (\$240,120.00)	\$132,390.00		\$372,510.00
Scenario Three	2006-07	6 Year Cycle (\$200,100.00)	\$132,390.00		\$332,490.00

New School Planning

- **School will have wireless network access.**
- **All classrooms will have a mounted projectors.**
- **All classrooms will have Smartboards.**
- **K-3 will have 5 workstation pods in each classroom.**
- **K-3 will share printer access for each grade.**
- **4-6 will have 25 - 30 classroom laptop computers.**
- **All staff workstations will be laptops.**
- **Radius server for wireless access authentication.**
- **OSX server for file server management.**

Proposed Direction For 2006-07

School	Grade	# Of Students Currently Enrolled	# of New Installs	# of Smartboards Required	Cost without Smartboard Expense	*Cost with Smartboard Expense	Year 1
MRE SDE	*4/5 English (MRE) 5/6 English (MRE) 4 English (SDE) 4 French (SDE)	25 26 27 30+	3 Mobile Labs 2 Smartboards	2 PAC funding from SDE and MRE. (TBD)	\$132,390.00	\$145,896.80	

***Note:** 4/5 English (MRE) represents the 25 Laptops implemented in 2005-06. This is working under the assumption these students will move up one grade with their current laptops.

***Note:** The cost of 30 laptops is \$44,130.00. To date we have deployed one set of 25 laptops. Each deployment is based on 3 - 5 replacements and a teacher laptop.

Example: If we require 30 student laptops then we need 35 computers for the replacement laptops and teacher laptop.

***Note:** The additional cost of a Smartboard installation is \$6,753.00 which includes the installation cost.

New School One to One Project 2007-08

Equipment	Location	Number	Cost/Unit	Year 1
K-3 Workstations (Center Model -5 Workstations)	Classrooms	40	\$1,500.00	\$60,000.00
Teachers	Classrooms	14	\$2,000.00	\$28,000.00
*Mobile	Classrooms	*130	\$1,300.00	\$169,000.00
Administration	Office	3	\$2,000.00	\$6,000.00
Server	School	2	\$10,000.00	\$20,000.00
Wireless	School	7	\$350.00	\$2,450.00
White Board	Classrooms	11	\$6,800.00	\$74,800.00
Peripherals	Classrooms			\$20,000.00
Total				\$380,250.00

***Note: Three Smartboards and 50 laptops will be moved from the old MRE school.**

Opening Day of The New School

2007-08

Equipment	Location	Number	Cost/Unit	Year 2
K-3 Workstations (Center Model -5 Workstations)	Classrooms	40	\$1,500.00	\$60,000.00
Teachers	Classrooms	14	\$2,000.00	\$28,000.00
Mobile	Classrooms	35	\$1,300.00	\$44,500.00
Administration	Office	3	\$2,000.00	\$6,000.00
Server	School	2	\$10,000.00	\$20,000.00
Wireless	School	7	\$350.00	\$2,450.00
White Board	Classrooms	3	\$6,800.00	\$20,400.00
Peripherals	Classrooms			\$20,000.00
Total				\$201,350.00

***Note: Three Smartboards and 50 laptops will be moved from the old MRE school. The initial 3 Smartboard installation would take place at the Grade 4-6 level.**

New School & Saint Dominic

2008-09

Equipment	Location	Number	Cost/Unit	Year 3
Mobile	SDE Classrooms	35	\$1,300.00	\$44,500.00
White Board	SDE Classrooms	2	\$6,800.00	\$13,600.00
Peripherals	New School Classrooms			\$20,000.00
Total				\$78,100.00

***Note: Two Smartboards would be installed at the new school Grade 3 level. The additional 35 laptops at Saint Dominic will now provide mobile laptop access at the grade 4, 5 and 6 level.**

Assumption Jr/Sr High School

2009-10

Equipment	Location	Number	Cost/Unit	Year 4
Mobile	Classrooms	35	\$1,300.00	\$54,628.00
White Board	Classrooms	2	\$6,800.00	\$13,600.00
Total				\$44,500.00

***Note: Two Smartboards would be installed at the new school Grade 2 level. The additional 35 laptops installed at AJSH will begin to bridge the transition of mobile laptops at the high school level.**

Assumption Jr/Sr High School

2010-11

Equipment	Location	Number	Cost/Unit	Year 4
Mobile	Classrooms	35	\$1,300.00	54,628.00
White Board	Classrooms	2	\$6,800.00	\$13,600.00
Total				\$44,500.00

***Note:** Two Smartboards would be installed at the Grade 7 level. The additional 35 laptops installed at AJSH will begin to bridge the transition of mobile laptops at the high school level.

One to One Planning



Student Workstation Specifications

13.3-inch widescreen display
Built in iSight Camera
MegaSafe Power Adaptor and Remote Desktop
OSX Tiger iLife 06 and iWorks
1280 x 800 resolution
2.0 Intel Core 2 Duo
1 Gig memory (2x512MB SODIMMs)
60GB 5400-rpm Serial ATA hard drive²
Combo drive (DVD-ROM, CD-RW)

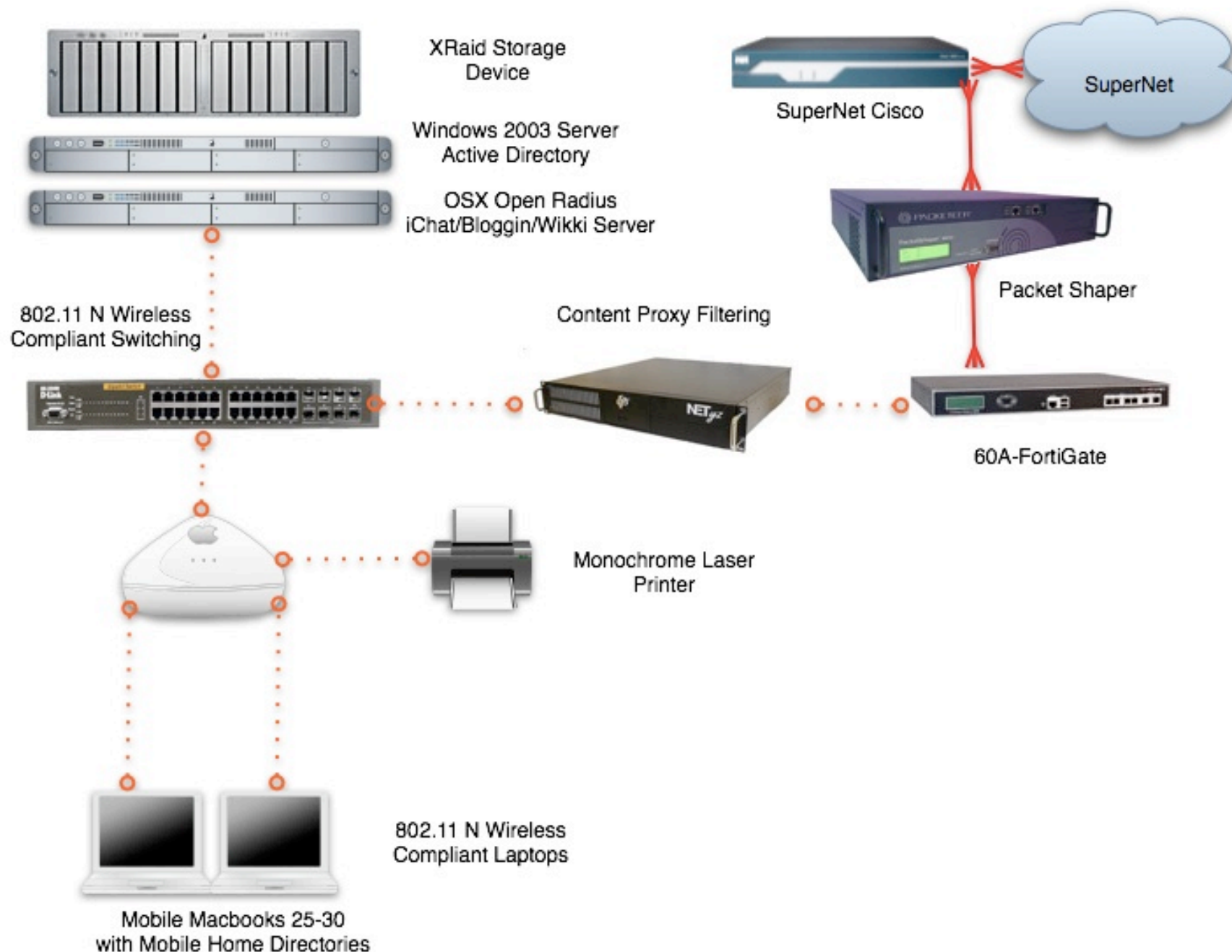
Teacher Workstation Specifications

13.3-inch widescreen display
Built in iSight Camera
MegaSafe Power Adaptor and Remote Desktop
Parallels Virtual PC Software
OSX Tiger iLife 06 and iWorks
3.3-inch widescreen display
1280 x 800 resolution
2.0GHz Intel Core 2 Duo
2 Gig MB memory (2x 1 GB SODIMMs)
60GB 5400-rpm Serial ATA hard drive²
SuperDrive (DVD±RW, CD-RW)

Mobile Lab Pricing

The 35 MacBook mobile lab includes
(30 Student Laptops)
(4 Replacements and 1 Teacher Computer)
MacBook 13.3" glossy widescreen display, 2.0
GHz Intel Core 2 Duo processor, 1 Gig memory,
60GB hard drive, Combo Drive (DVD-ROM/CD-
RW), 10/100/1000 Base-T Ethernet, AirPort
Extreme, Bluetooth;
(1) Bretford 32 Laptop Mobility Cart;
(1) Getting Started with Your Apple Mobile
Learning Lab Guide;
(1) AirPort Extreme Base Station;
(2) Ethernet cables; and (1) Apple Remote
Desktop v3
(35) 60W Magsafe power adapters with cords
and duckheads.
Software iLife applications, Mac OS X and other
software.

Implementation Map



Equipment Specifications

The 20 MacBook mobile lab includes (20) MacBook 13.3" glossy widescreen display, 2.0 GHz Intel Core 2 Duo processor, 1 Gig memory, 60GB hard drive, Combo Drive (DVD-ROM/CD-RW), 10/100/1000 Base-T Ethernet, AirPort Extreme, Bluetooth;

(1) Bretford 32 Laptop Mobility Cart;

(1) Getting Started with Your Apple Mobile Learning Lab Guide;

(1) AirPort Extreme Base Station;

(2) Ethernet cables; and (1) Apple Remote Desktop v3

(20) 60W Magsafe power adapters with cords and duckheads.

Software iLife applications, Mac OS X and other software.

Product Item	Function					Cost
BB793LL/A 5 Pack Macbook 2.0 Ghz Core 2 1 Gig RAM \$7840.00	Replacement + Teacher Laptop					\$7,840.00
BB216LL/A Macbook Wireless Mobile Lab (10- Pack) with AppleCare Protection Plan - Auto Enroll \$15979.00	Student Laptops					\$15,979.00
BB960LL/A Macbook Wireless Mobile Lab (20- Pack) with AppleCare Protection Plan - Auto Enroll \$29659.00	Student Laptops					\$29 659.00
D3385LL/A Alberta Advance Disposal Surcharge - Laptops/ Electronic Notebooks 5	Recycling Fees					\$150.00
Network Laser Printer	Classroom Printer					\$1000.00
Total						\$54 628.00

Classroom Specifications

Items	Cost
Projector	
1 NEC LT245 DATA PROJECTOR (SKF PRICING) \$1,919.00	\$1,919.00
1 CEILING MOUNT FOR PROJECTOR \$274.20 \$274.20	\$274.20
1 PREMIER AST 2446 CEILING MOUNT EXTENSION POST \$183.40	\$183.40
SCREEN	
1 SMART SB580 - 77" DIAGONAL FRONT SMARTBOARD (SKF PRICE) \$1,819.00	\$1,819.00
1 SHIPPING CHARGES FOR SMART (SMARTBOARD) \$130.00	\$130.00
1 SMART Speaker Set	\$300.00
SIGNAL DISTRIBUTION	
1 EXTRON P2DA2WM F AAP SIGNAL BOOSTER	\$595.28
1 EXTRON 6' - 15 PIN HD CABLE WITH AUDIO \$42.12	\$42.12
SOURCE MACHINES	
1 TOSHIBA SDV383 COMBINATION VCR/DVD UNIT (Placed on teachers desk) \$190.40	\$190.40
MATERIALS, LABOUR and Power Installation (VGA and composite cabling \$300.00)	\$1300.00
Total	\$6,753.40

What Have We Done To this Point?

- Doug, Glenn and Odette Caron attended the Quebec, Maggog one to one conference in May 2005.
- Glenn attended the Apple Developer Conference in San Francisco July/2005.
- John Gilson complete iBook repair certification course Aug/2005.
- JoAnne and Glenn attended the CASSA conference on one to one implementation in Quebec City Oct/2005.
- Glenn, Kurt and John deployed the first setup of laptops at MRE Dec/2005.
- Glenn deployed the first OSX server and mobile account users at MRE Dec/2005.
- Glenn and LaVerne met with an Edmonton SIS company that is developing an report card Feb/2006.
- Deanna, JoAnne, Benoit, Theresa and Glenn toured the Fort Saint John one to one writing project Feb/2006.
- Glenn, JoAnne and Deanna met with SAS to see what is developing for the Elem Report Cards March/2006.
- JoAnne, Bernadette, Deanna and Glenn attended a meeting with Sharon and Apple support staff March/2006.
- JoAnne and Glenn attend a Webinar from Edmonton Catholic in regards to their report cards. March/2006.
- Glenn attended and completed the Capser OSX imaging and inventory certification course April/2006.
- Kurt attended the BC one to one user conference in April/2006.
- Kurt completed Apple's One to One implementation course in April/2006.
- Kurt will be attending the Developers Conference in August/2006.
- Kurt and Glenn attended MacRetreat Conference in San Jose focusing on AD-OD integration and wireless.
- JoAnne, Bernadette and Glenn attended the Alberta Learning One to One presentation Oct 30/2006.
- Kurt and Glenn attended Apple One to One presentation in Calgary Nov 16/2006.

Implementation Questions

- What will the curriculum support model look like for next year in the advent of expanding the implementation?
- What is the timeline for data collection and validation?
- Who is responsible for the data collection report development?
- What role will consultants and Apple staff have in the up and coming implementation year?
- What will the ICT support model look like for next year in the advent of expanding the implementation?
- Will a board presentation be required? Who will present?
- Will budget information be determined so the order can be placed by the beginning of June?
- When will the implementation training take place for new staff?
- When will the students be able to take the laptops home?
- Will we be able to develop a parent consent form that provides adequate insurance for mobile laptops?
- When do we hold parent information meetings in regards to the laptop implementation?
- Should we budget for laptop carrying cases for next year?
- Will we be able to schedule the Smartboard installations at the required sites prior to September?
- What is the 5 - 10 year plan for the Cold Lake schools in regards to mobile computers?
- How does the implementation of mobile computers impact the evergreen cycle?
- Will we have the funding to implement a one to one project from grades 4-6 at the new school?
- What is the perception of the staff who have been chosen to pilot one to one implementation?
- What is the plan and timeline for a web based elementary report card program?

Technology Support Model

- What does technology support look like for the 2006-07 school year?
 - Focus on one to one training and support.
 - Address all other schools on a Help Desk request bases.
 - Supporting one to one PLC group.
 - Assist schools in using SAS to support the new assessment model.
 - Continuing to support and develop the ICT scope and sequence.
 - Start to develop Computer CTS scope and sequence resources.
 - Support video conferencing training and instructional implementation.
 - Continuing the support of Alberta Learning technology initiatives.
- What does technology support look like for the 2007-08 school year?
 - Move the current staff back into the classrooms and hire/train new staff.
 - Move the current staff back into the classroom and develop lead teacher role.
 - How does the role of the curriculum coordinators change?

Implementation Questions

- What is a better funding model? Leasing or Purchasing?
- How will the yearly evergreen funding look like?
- What will the laptop implementation look like in the advent of not being able to implement a one to one ratio?
- How will teachers plan differently in the advent of sharing mobile laptops?
- What are the best practice models for sharing mobile laptops?
- What are the absolute essentials in a 21st century classroom?
- How many spare replacement laptops will be required for long term implementation?
- How will the technology department maintain a secure wireless network that both PC and Mac can access?
- Who will assist teachers in developing and using the adaptive technologies on the laptops?
- What adaptive technologies can we plan on taking advantage of?
- Would Barry Bennett help in developing a one to one project implementation strategy?

Proposal Questions

8.3 section D

Describe how each of the following essential components will be addressed:

Provision of professional development aligned with best practice.

Lakeland has maintained 2 full time ICT Support Teacher positions for the last three years. The mandate for these positions has been to develop a school specific ICT scope and sequence based on the current provincial curriculum, staffing skill sets, hardware and software in each individual school. The schools now have a curriculum planning document that can be used to guide the teachers implementation of ICT at the various grade levels and subjects areas. The scope and sequence has also provide the means to identify and address specific training requirements of the instructional staff. The ICT Support Staff are now in the process of working with school administration to coordinate planning and implementation professional development for the teachers throughout the district. The teachers across the district have also participated in ASIS projects focusing on Early Literacy, Moral Intelligence, Brain-based Learning, Differentiated Instructional Techniques and Assessment of Learning. The ICT support staff focus on implementing technology within the classroom to meet the ICT curriculum outcomes but within context of instructional strategies being implemented across the district over the last 4 years.

ICT Scope/Sequence and Resource Development = <http://www.lcsd150.ab.ca/ict/>

ASIS Support = <http://student.lcsd150.ab.ca/DI/>

ASIS Support = <http://student.lcsd150.ab.ca/literacy/>

Proposal Questions

8.3 section D

Describe how each of the following essential components will be addressed:

Promotion of 21st century skills.

Lakeland staff and students have completed and are working on a number of projects that reflect the focus of the 21st century skill sets being promoted in the district:

1. Teachers and students across the district have been inserviced on Media Awareness and Internet Safety. The ICT Support Teachers continue to model the classroom instructional practices to maintain a safe learning environment for the students in the cyber world.
2. The high school students at NDH used Webcrossing to develop and post electronic portfolios.
3. Middle school and high school students have begun to incorporate video and digital image editing projects in core curriculum courses as a means to present information to teachers and students.
4. High school students are working on developing science related podcast content for review and content attainment projects.
5. Middle school students are using Garage Band and podcasting to demonstrate Moral Intelligence objective attainment.
6. Middle school and high school students are developing webpages to reference internet research completed in core subject and CTS courses.
7. The district has begun to deploy Smartboard technology into the classroom which has provide the means for teaching staff to incorporate Internet based content and programs in daily instructional activities. Students are also using the Smartboard technology to complete and present projects to the class and teacher.
8. Staff members have attended Differentiated Instructional conferences in Florida and Las Vegas focusing on ICT and 21st century skill set attainment. (Benoit and Jojo)
9. Deanna Steptoe, Jojo and Benoit are working on a Cyber-Library database to track and reference useful internet resources commonly used by teachers across the district.
10. Elementary students have used moderated online discussion tools to communicate with other students in the district.

Proposal Questions

8.3 section D

Describe how each of the following essential components will be addressed:

Integration of curriculum and technology and use of multimedia resources and software.

Reference the ICT support website for support resources and project examples. (<http://www.lcsd150.ab.ca/ict/>) The ICT scope and sequenced developed across the district provides an outline for the ICT curriculum integration based on the current skill set, hardware and software the school possess. The base software image for the computer across the district includes the following:

1. Microsoft Office
2. Adobe/Macromedia Suite (Dreamweaver, Flash, and Fireworks)
3. Cmap Tools and or Kidspiration
4. iLife Suite
5. Movie Maker
6. iTunes (PC/Mac)

The following items represent the district wide services provided to staff and students.

1. Webcrossing Plugins (blogging, wikkis, moderated discussions, email and website development)
2. Intranet Quicktime Streaming server (stream.lcsd150.ab.ca)
3. iChat video and chat server (stream.lcsd150.ab.ca)
4. Elluminate server (Support and professional development desktop mirroring tool - online.lcsd150.ab.ca)
5. SAS (Students Achieve Server) Online student, teacher and parent reporting tool.
6. Online IPP program (Individual Personal Plan) Online individualized student planning tool.
7. Cmap server. (Open source) Concept map server and sharing tool. (cmap.lcsd150.ab.ca)

Proposal Questions

8.3 section D

Describe how each of the following essential components will be addressed:

Integration of curriculum and technology and use of multimedia resources and software. (continued)

8. Twenty one Smartboard and projector installations across the district.

9. Polycom video conferencing equipment installed at district office and Holy Family school to facilitate board and principal meetings. The district is currently reviewing the classroom support opportunities for the high school student courses.

10. Air conditioning all computer labs across the district with the exception of Holy Family Catholic School. This was very important to address the temperature concerns in late and early summer months.

Proposal Questions

8.3 section D

Describe how each of the following essential components will be addressed:

Acquisition and deployment of network architecture, security measures, hardware, and software.

1. Network Architecture

-The district has currently deployed a Packeteer - Packet Shaper to shape, monitor and control network traffic across the district WAN. This device will be used to monitor and shape network protocol activity from the wireless networks deployed throughout the district to ensure protocol priorities are established and maintained. The Packeteer will be used to analyze network latency issues generated from the mobile laptop network traffic.

-Lakeland Catholic also currently uses a Linux based filtering proxy to control content filtering. An Active Directory plugin is currently being developed and tested. The other solution for content filtering that currently has an AD plugin is the Fortigate Edge Device currently deployed by the school division.

-All switching and wireless access points must be 802.11 N compliant. Reference online white paper for technology overview. (<http://www.deviceforge.com/articles/AT5096801417.html>) This wireless bandwidth will be important for desktop video conferencing capabilities example: iChat and XMeeting (This project develops video conferencing and VoIP applications for Mac OS X. XMeeting is based on the work of the OpenH323 project which provides the libraries for H.323 and SIP support. <http://sourceforge.net/projects/xmeeting/>), Alberta Learn Quicktime streaming and Webcrossing discussions, blogging and wiki collaboration tools. The number of wireless switches and access points will be determined by the scope of the wireless access in the buildings. example: Wireless room vs wireless building

-All servers and network devices over Gigabyte will be connected via Gigabyte DLink Switching equipment. (Currently testing the DWS 1008 Wireless Switch and DWL 8220 Access Points but will deploy DWS 3227P and DWL 2230 Wireless Access Points for security, Power over Ethernet, Gigabyte and 802.11 N compliance.

-The district Intermapper server (<http://dartware.com/products/intermapper/index.html>) will be used to monitor wireless access points and switching equipment for loads and latency trends.

Proposal Questions

8.3 section D

Describe how each of the following essential components will be addressed:

Acquisition and deployment of network architecture, security measures, hardware, and software.

2. Security Measures

- The district plans on using the built in Dlink wireless security and monitoring tools. Currently supports WEP, WAP and WPA2 authentication protocols and rogue access point detection tools.
- Lakeland Catholic has been testing the "Free Radius Authentication Server" which supports EAP, with EAP-MD5, EAP-SIM, EAP-TLS, EAP-TTLS, EAP-PEAP, Cisco LEAP sub-types. and proxying, with fail-over and load balancing(<http://www.freeradius.org/>) (<http://www.tldp.org/HOWTO/8021X-HOWTO/intro.html#AAA>) and Elektron (<http://www.periodiklabs.com/elektron/>) for wireless network authentication services. The district will also be exploring the use of the Microsoft 2003 Certification Server tools to create a secure login for Active Directory authentication services.
- All laptops will be imaged and will require administrative passwords to change the wireless access point settings. Laptop specific home wireless and LAN network settings will be created on each workstation in the advent the students take the laptops home during the pilot project.
- All laptops will be stored in secure mobile charging carts. (<http://www.bretford.com/made4mac/pd32lmc.asp>)
- All teacher laptops will have Apple Remote Desktop with access to control and monitor laptop usage in the schools. The network technicians can also use this tool to monitor and or update the laptops over subnets across the district.
- Casper (JSS) server (<http://www.jamfsoftware.com>) and Apple Remote Desktop servers will be used to update and track laptop activity.

Proposal Questions

8.3 section D

Describe how each of the following essential components will be addressed:

Acquisition and deployment of network architecture, security measures, hardware, and software.

3. Hardware

- Student Laptop (White) - Apple Macbook
 - 13.3-inch widescreen display
 - Built in iSight Camera
 - MegaSafe Power Adaptor and Remote Desktop
 - OSX Tiger iLife 06 and iWorks
 - 1280 x 800 resolution
 - 2.0 Intel Core 2 Duo
 - 1 Gig memory (2 x 512MB SODIMMs)
 - 60GB 5400-rpm Serial ATA hard drive
 - Combo drive (DVD-ROM, CD-RW)

30 student laptops will be deployed per mobile cart depending on the number of students in the classroom. 2 additional spare laptops will be stored in the cart for same day replacement of damaged laptops. 2 additional laptops will stored off site for replacement and parts if necessary.

5 additional power supplies and battery replacements will also be stored off site for repair and maintenance.

1 Bretford cart which can accomodate up to 32 laptops per classroom.

Note: 4 spare laptops will be allocated for every 30 student laptops deployed. This will be necessary to provide the 24 hour turn around on technology repairs and replacement.

Proposal Questions

8.3 section D

Describe how each of the following essential components will be addressed:

Acquisition and deployment of network architecture, security measures, hardware, and software.

3. Hardware

- Staff Laptop (Black) - Apple Macbook

- 13.3-inch widescreen display

- Built in iSight Camera

- MegaSafe Power Adaptor and Remote Desktop

- Parallels Virtual PC Software

- OSX Tiger iLife 06 and iWorks

- 3.3-inch widescreen display

- 1280 x 800 resolution

- 2.0GHz Intel Core 2 Duo

- 2 Gig MB memory (2 x 1 GB SODIMMs)

- 60GB 5400-rpm Serial ATA hard drive

- SuperDrive (DVD±RW, CD-RW)

- Apple Bluetooth wireless keyboard and mouse

- 19' LG Display

- VGA adaptor for Smartboard and projector installation

Note: 1 spare teacher laptop, 1 additional power supply, 1 additional battery replacement per teacher workstation will be kept off site for repair and maintenance.

Proposal Questions

8.3 section D

Describe how each of the following essential components will be addressed:

Acquisition and deployment of network architecture, security measures, hardware, and software.

3. Hardware

- Windows 2003 Active Directory Server

Specs from Kurt

- OSX server

1U rack-optimized enclosure, quad Xeon 64-bit server features two dual-core Intel Xeon "Woodcrest" processors running at up to 3.0GHz, each with 4MB of shared L2 cache and a 1.33GHz independent frontside bus. Xserve can be configured (via configure-to-order "CTO" online ordering) with two 2.0, 2.66 or 3.0GHz dual-core Intel Xeon processors. Xserve features a 256-bit wide fully-buffered memory architecture and includes 1GB (2x512MB) of 667MHz DDR2 ECC FB-DIMM memory, expandable up to 32GB. Xserve systems feature three Apple Drive Module expansion bays which can support Serial ATA (SATA) as well as high-performance 15,000-rpm Serial Attached SCSI (SAS) drives and two x8 PCI Express expansion slots (one which can be configured as a PCI-X slot). The base configurations come with two dual-core 2.0GHz Intel Xeon processors, a single 80GB SATA Apple Drive Module, a slot-loading Combo (DVD-ROM/CD-RW) optical drive, and a single 650W power supply which can be upgraded to dual-redundant power supplies via CTO. All Xserve system include: two on-board 10/100/1000 Base-T Gigabit Ethernet ports, internal graphics with 64MB of RAM and a mini-DVI output (mini-DVI to VGA adapter included), two USB ports, three FireWire ports (one FireWire 400 on front, two FireWire 800 on back), a DB-9 serial console port, and lights-out management capabilities through the included Server Monitor software. Mac OS X Server, Unlimited client license version, and rack-mounting hardware is included. Service and support is 90 days of toll-free telephone support and one-year limited warranty.

For more detailed information, please refer to product data sheets or the Xserve web site (<http://www.apple.com/ca/xserve/>)

- Network Printers (Richo)

- 500 sheet paper tray

- USB and Ethernet networking

- 256 Megs RAM

Proposal Questions

8.3 section D

Describe how each of the following essential components will be addressed:

Acquisition and deployment of network architecture, security measures, hardware, and software.

3. Hardware

-Webcrossing Server

Beyond built-in basic message board functionality, WebCrossing Core includes fully-functional internet protocols: multi-domain web server, newsgroup server, email server, chat server, XML-RPC server, FTP server, and more. (<http://www.webcrossing.com/Home/plugins.htm>)

-WebHelp Desk Server

Web based ticket request, inventory tracking, and FAQ support service. (<http://www.webhelpdesk.com/feature.html>)

-Cmap Server

Open source concept mapping sharing server. (<http://cmap.ihmc.us/>) (<http://cmap.ihmc.us/Publications/WhitePapers.php>)

-Gaggle Server (<http://www.gaggle.net/faq.html>) and or StudyWiz (<http://www.studywiz.com>) (<http://www.apple.com/education/solutions/instructionalmanagement/>)

For 1-1000 students the set up fee is \$3,600

For 1001-5000 students the set up fee is \$9,000

The annual license fee includes all the support you require from our global support team, all updates and upgrades of Studywiz. The fee is per student users; teachers and parents are free.

The annual fee for 1-1000 students is \$8.75 per student

The annual fee for 1001-5000 students is \$7.50 per student

-OSX and or Fortigate VPN services for remote staff access to school files.

Proposal Questions

8.3 section D

Describe how each of the following essential components will be addressed:

Acquisition and deployment of network architecture, security measures, hardware, and software.

4. Software

Laptop Software

- iLife suite

- Microsoft Office suite

- Adobe/Macromedia suite

- Kidspiration/Cmap

- iChat

- Xmeeting Open Source Video Conferencing Software

- OSX System Software Universal Access Settings

- OSX System Language Settings (French and English)

- Remote Desktop

- Casper Ghosting Software

- OSX Educational Dashboard Widgets

Proposal Questions

8.3 section D

Describe how each of the following essential components will be addressed:

Provision of technical support and training

-Reference current professional development and conference attendance over the last 3 years. The district currently employees the following support staff:

1. Director of Technology
2. IT Coordinator
3. Workstation Technician
4. 2 ICT support teachers
5. SIS (Student Information System) Coordinator

The district technology budget currently finances \$15 000.00 to \$20 000.00 for technology staff professional development. The current ICT support teachers have developed and maintained a district support website. (<http://www.lcsd150.ab.ca/>) The district maintains a Webhelp support site for tracking computer ticket request and equipment inventory.

Key Elements to Consider:

- The one to one project will require technical and leadership training for the school based administrative teams. Key areas of pd will be on assessment of learning and technology modeling for administrative staff.
- The project will require a curriculum coordinator to over see the data collection, professional development, ICT infusion assistance, and assistive technology training. It will be important to maintain the curriculum focus on the technology project.
- Senior administrative staff will have to share the project presentation and information to parent and teacher groups.

Proposal Questions

8.3 section D

Describe how each of the following essential components will be addressed:

Strategies for community consultation, collaboration and communication

The district has already began the process of mobile lab deployment which has involved a number of professional development opportunities and one to one conferences across North America. Reference district new school wireless project.

The Lakeland Catholic School Boards has allocated \$700 000.00 for mobile lab deployment over three schools in Cold Lake. The initial mobile labs will be deployed over the up and coming months.

Professional develop dates are being created for the initial teaching staff beginning to use the laptops. Once the laptops begin to be deployed in the classrooms, parent meetings will be held to highlight the direction of the board with the mobile technology and the building of the new school technology infrastructure.

In the advent of getting the provincially funded one to one project money it will become very important to update and inform staff, parents and students the scope of the project.

The district website has the capability to support open discussions and forums in order to receive feedback from the parent community.

Proposal Questions

8.3 section E

Describe how initiative will be monitored and evaluated. The evaluation plan should include

A Tracking process for monitoring and reporting the status of deliverables and adherence to project timelines.

The district currently has all the necessary web base tools to create online calendars, discussion, blogs and wikis to facilitate project guidelines and data collection. This would have to be setup and pd training given to all parties involved in the project. Apple has also developed a web based product for the Maine One to One project. Glenn has asked Kevin Blomme to check into the cost and possibilities of such a service.

The district also maintains the Webhelp Desk product which can be used to track technology and training requests associated with the one to one projects.

Proposal Questions

8.3 section E

Describe how initiative will be monitored and evaluated. The evaluation plan should include

A statement of expected outcomes and measures, and a process for how the outcomes will be measured

1. All student laptop repairs that require the replacement of a current student laptop will be provided on site using the 10 min rule for replacement.

Tracking - Student Feedback and teacher documented HelpDesk tickets.

2. All laptops requiring warranty repairs will be completed within one week.

Tracking - Technician HelpDesk ticket data. Terms of equipment repairs has to be established with Westworld Computers.

3. All laptops will maintain mobile networking accounts with network syncing that authenticate to Active Directory Services.

Tracking - Monitoring HelpDesk tickets for network authentication issues. Monitoring wireless access point latency and up time using Intermapper probes.

4. All laptops will use a secure wireless authentication protocol to connect to directory services.

Tracking - The laptops can authenticate to Active Directory using Free Radius or Certification services on a Windows 2003 server. Student feedback and teacher HelpDesk requests to track login issues.

5. All laptops will have software and user settings managed through the use of Casper, Workgroup Manager and Remote Desktop over wireless connections.

Tracking: Recording the frequency of software updates over wireless connections. Recording the software and laptop activity using Casper JSS server.

Proposal Questions

8.3 section E

Describe how initiative will be monitored and evaluated. The evaluation plan should include

A process for how interim evaluations will be used to make adjustments to the initiative.

Possible Laptop one to one implementation changes:

1. Changing mobile home directories to local user accounts due authentication issues. The students will then complete manual mounts of the file server resources. Casper will then be used to manage the user settings on the local laptops. If the laptops experience Active Directory authentication issues then the directory services will be switched to Open Directory Services on an OSX server.
2. If secure Radius authentication is causing problems then the laptops will be set to use the wireless access point security settings.
3. If the wireless access point coverage is too small the laptop movement will be restricted to the classrooms.
4. If wireless printing is creating network access concerns, printing restrictions may be implemented on the users.

Proposal Questions

8.4 Detailed Budget

Description	Cost
Network Installation & Maintenance	$\$5000.00/\text{Switch} \times 2 = \$10\,000.00$ $\$300.00/\text{Access Point} \times 20 = \$6000.00$ $\$500.00/802.11\text{N Wireless Router} \times 2 = \$1000.00$ Power and mounting installations/school \$2000.00 Note: Pricing will vary based on the number of access points and replacement equipment.
Hardware	MA409LL/A OSX Server \$5000.00 M9721LL/A X Raid \$7000.00 Windows 2003 Server \$7000.00 35 Mobile Cart Laptops = \$54 628.00 35 Mobile Cart Laptops = \$54 628.00 Rechargeable Batteries = $\$139.00 \times 10 = \$1390.00$ Additional Power Supplies = $\$85.00 \times 10 = \$850.00$ 2 Teacher Macbooks = $\$2000.00 \times 2 = \$4000.00$ 2 Apple Wireless Keyboard and Mouse = $2 \times \$130.00 = \$260.00$ 19 LG Display = $\$300.00 \times 2 = \$600.00$ 2 Richo Network Printers = $2 \times \$1000.00 = \$2000.00$ 2 Smartboard unit installs = $\$7000.00 \times 2 = \$14\,000.00$
Software	*Apple System Software 36 month Assurance D2088LL/A $\$139 \times 72 = \$10\,008.00$ Inspiration/Cmap Concept Mapping Read Write Gold

Proposal Questions

8.4 Detailed Budget

Description	Cost
Technical Support and Training	3D3468Z/A OSX Server Essentials =\$1080.00 D3459Z/A Directory Services Integration and Management =\$2160.00 M3916LL/B Applecare Help Desk Tools =\$1063.00 *Apple Staff Training and Leadership Development Discussing with Kevin Blomme.
Shared Research	\$10 000.00 x 3 years =\$30 000.00
Project Coordination	Curriculum/Professional Development Coordinator ICT Teacher
Non Funded Costs	Reference professional development and one to one conferences to date.